

**MBNMS Research Activity Panel  
Meeting Summary  
May 14, 2010**

**Host:** Kerstin Wasson – Estuarine Ecology (Elkhorn Slough NERR and Foundation)

**Location:** Elkhorn Slough National Estuarine Research Reserve  
1700 Elkhorn Road  
Watsonville, CA 95076

**Date:** Friday, May 14<sup>th</sup>, 2010; 9:00 am to 12:00 pm

**MEMBERS:**

	<b>Discipline</b>	<b>Primary/ Alternate</b>	<b>Name</b>	<b>Institution</b>
X	Research Coordinator		DeVogelaere, Andrew	Monterey Bay National Marine Sanctuary
X	Biological Oceanography	primary	Kudela, Raphael	University of California, Santa Cruz
	Biological Oceanography	alternate	Chavez, Francisco	Monterey Bay Aquarium Research Institute
X	Deep-Sea Ecology	primary	Cailliet, Greg	Moss Landing Marine Laboratories
X	Deep-Sea Ecology	alternate	Haddock, Steve	Monterey Bay Aquarium Research Institute
X	Estuarine Ecology	primary	Wasson, Kerstin	Elkhorn Slough NERR and Foundation
	Estuarine Ecology	alternate	Watson, Beth	Elkhorn Slough NERR and Foundation
	Fisheries	primary	Grimes, Churchill	NOAA Fisheries Service
	Fisheries	alternate	Vasques, Jason	California Department of Fish & Game
	Marine & Coastal Geology	primary	Storlazzi, Curt	United States Geological Survey
	Marine & Coastal Geology	alternate	Paull, Charles	Monterey Bay Aquarium Research Institute
	Marine Conservation Biology	primary	<b>Harrold, Chris*</b>	Monterey Bay Aquarium
	Marine Conservation Biology	alternate	Micheli, Fiorenza	Hopkins Marine Station
	Marine Policy	primary	Abeles, Adina	Center for Ocean Solutions
	Marine Policy	alternate		
	Nearshore Ecology	primary	Lindholm, James	California State University Monterey Bay
	Nearshore Ecology	alternate	Carr, Mark	University of California, Santa Cruz
	Physical Oceanography	primary	McPhee-Shaw, Erika	Moss Landing Marine Laboratories
	Physical Oceanography	alternate	Ramp, Steve	CeNCOOS/MBARI
	Shelf & Slope Ecology	primary		
	Shelf & Slope Ecology	alternate	Starr, Rick	California Sea Grant Extension Program
X	Social Sciences	primary	Pomeroy, Caroline	California Sea Grant Extension Program
	Social Sciences	alternate	Scorse, Jason	Monterey Institute of International Studies
X	Water Quality	primary	<b>Hunt, John†</b>	University of California, Davis
	Water Quality	alternate	Epel, David	Hopkins Marine Station

\*Sanctuary Advisory Council Member: Research (Primary)

†Sanctuary Advisory Council Member: Research (Alternate)

**GUESTS:**

	<b>Name</b>	<b>Institution</b>
X	Burton, Erica	Monterey Bay National Marine Sanctuary
X	Faloon, Kristine	Monterey Bay National Marine Sanctuary
X	Graham, Michael	Moss Landing Marine Laboratories

**CONSENT ITEMS**

Introductions/Modifications to the Agenda (Hunt)

**HOST PRESENTATION AND DISCUSSION**

Estuarine Conservation Research at the Elkhorn Slough Reserve (Wasson)

- Kerstin Wasson discussed 3 projects
  - Salt marshes: past, present, future
    - Studying potential effects of sea level rise
    - Predict: Narrow salt marsh band (less sediment, less salt marsh plain, bath tub slough)
    - Website will be made available of past/future distributions of intertidal habitats and different sea level rise scenarios (Sample GIS Visualizations)
    - **ACTION**: Wasson asked if members of the RAP would like to be involved/attend meetings on this project? Or hear a longer presentation in the future?
  - Eutrophication thresholds
    - 20-yr data set of monthly WQ data set
    - Technical report on web (Hughes et al. 2010)
    - [http://www.elkhornslough.org/research/bibliography\\_tr.htm](http://www.elkhornslough.org/research/bibliography_tr.htm)
  - Native oyster restoration science
    - Olympia oysters: improve water quality, and provide habitat
    - Abundant oysters occur only in upper estuary (~5000 oysters remain in estuary)
    - Nearest northern population is in SF Bay, nearest southern population is Morro Bay (slough connects north/south pops)
    - Recruitment variable across sites and across years
    - Pilot project: translocate lower estuary dead clam shells (bagged with biodegradable mesh) into upper estuary
    - [http://www.elkhornslough.org/research/conserv\\_oysters.htm](http://www.elkhornslough.org/research/conserv_oysters.htm)

**SANCTUARY RESEARCH UPDATE**

Sanctuary Research Update (DeVogelaere)

- NOAA DeHavilland Twin Otter (plane) at Monterey Jet Center
  - Two pilots in MBNMS office: LT Jason Mansour, LCDR Brad Fritzler
  - Research uses of the plane include:

- Marine mammal survey at, and adjacent to, the Davidson Seamount Management Zone
  - Leatherback Sea Turtles and jellies
  - Plane sent to the Gulf of Mexico for oil spill response
  - <http://montereybay.noaa.gov/research/platforms/twinotter.html>
- NOAA Ship *McArthur II*
  - In the MBNMS July 2010:
    - Marine mammal and seabird survey at Davidson Seamount Management Zone
    - CalCOFI lines
  - If RAP interested in using ship, let DeVogelaere know
  - <http://www.moc.noaa.gov/mt/index.html>
- Sanctuary Characterization & Image Display (SCID) Project
  - Partners: CSUMB, MBNMS
  - Map available online
  - <http://sep.csumb.edu/ifame/scid/>
- Historical Timeline of central CA and resources
  - Sea Grant Fellows project (Steve Choy and Hugo Selbie)
  - Historical timeline available online (draft)
  - <http://www.sanctuarysimon.org/timeline/>
- West Coast Sanctuaries working to issue multi-year, multi-sanctuary permit to NOAA Fisheries for West Coast Trawl Survey
  - Per MBNMS regulations, no trawling will occur within Davidson Seamount Management Zone, or at USS *Macon* wreck site
  - In addition, permittee was requested to coordinate with Nature Conservancy on avoiding research trawl closures in Morro Bay area
- Sanctuary Exploration Center, Santa Cruz
  - Groundbreaking Ceremony July 12, 2010
  - MBNMS focusing on PR
  - <http://montereybay.noaa.gov/vc/sec/welcome.html>
- Staff reduced due to limited budget (lost one SIMoN Scientist; 4 full-time positions reduced to part-time)
- “Fishes of the World” Exhibit PG Natural History Museum reached 15,000 visitors (Partners included MLML, CSUMB)
- SIMoN developed National Registry of Observing Systems: handed off to University of Southern Florida
  - Online map resides on CeNCOOS website
  - <http://www.cencoos.org/OceanObs/>
- Davidson Seamount: MBARI mapped with AUV at 3 meter resolution; publication forthcoming
- Artificial Reefs:
  - Hot topic for the SAC; SAC/divers believe it’s a good idea
  - RAP might be asked to provide input
  - RAP agreed:
    - Pros/cons, and concerned about impacts
    - Literature available

- RAP interested in topic
- Blue Ocean Film Festival:
  - MBNMS involved in PR and planning
  - Francisco Chavez, Steve Ramp, and Frank Schwing involved in drifter deployment in California Current

## ENHANCED ECOSYSTEM-BASED MANAGEMENT INITIATIVE

- Andrew DeVogelaere provided brief update
  - Frank Schwing has become NOAA Fisheries' leader on effort
  - Schwing gave a presentation to SAC on EBM and Integrated Ecosystem Assessments (IEAs) and similar presentation to MBCORC
  - Phil Levin (NOAA Fisheries) gave presentation at Sanctuary Currents Symposium on IEAs
  - Fall 2010: Upcoming Workshop: do MPAs provide research benefit?

## PRESENTATION (requested by RAP)

Seaweeds Are Key to a Sustainable Society (Mike Graham/Moss Landing Marine Labs)

- Seaweeds can recycle carbon and nitrogen...can we take advantage?
- Abalone Aquaculture - Initial goal: integration of red algae into abalone aquaculture
- Red algae: *Gracilariopsis andersonii* grown on outer side of Monterey Harbor wall
- 1-yr feeding study 25% increase in abalone with 5% red algae (took 9 months off of 3 yr grow out, better project, more environmental; better taste/texture)
- Next goal: decrease cost of abalone feed – kelp silage (analogous to cow alfalfa silage)
  - Vacuumed sealed
  - Currently conducting controlled feeding experiment
- Moss Landing Power Plant/Kaiser property work: using kelp (*Macrocystis*) as pre-filter for Calera cement plant; potential for 3-20 tons kelp per week (1 ton nitrogen recovered)
- <http://www-csgc.ucsd.edu/NEWSROOM/NEWSRELEASES/2009/RedAbaloneDiet.html>

## DISCUSSION ITEMS

Proposed Halibut Trawl Fishery: RAP Ad Hoc Committee Preliminary Meeting (DeVogelaere)

- RAP Ad Hoc Committee formed:
  - Cailliet
  - Grimes
  - Lindholm
  - Scorse
  - Storlazzi
- Committee reviewed three documents
- Committee reviewed green sturgeon docs, critical habitat (per Grimes)
- Additional literature was suggested at meeting and will be reviewed
- Committee will provide input to Superintendent

- Pomeroy and Starr expressed interest in the committee; did not attend the first meeting; will be notified of next meeting
- DeVogelaere will follow-up with Ad Hoc Committee to determine next steps

#### RAP Membership: Ad Hoc or At-Large (Hunt)

- At several recent RAP meetings, the RAP has raised the question of expanding RAP membership
- RAP discussed the following specific issue:
  - Do we need Chemical Oceanography member(s) as suggested?
  - Is there a Management Plan Issue that requires regular input from a Chemical Oceanographer?
  - Are we regularly addressing a Chemical Oceanography related issue?
- RAP questioned the need to create a method of adding Ad Hoc or At-Large member (e.g., issue needs addressing where expertise on RAP not available), for example:
  - Artificial Reefs
  - Trawling
- Short-term, issue-based input could probably be addressed with Ad Hoc Committee or Ad Hoc Membership, and probably not an issue
- When RAP “Purpose and Protocols” were developed and finalized in May 2006, the RAP decided not to have At-Large members
- Everyone at meeting content with existing structure, with continued use of Ad Hoc advisors

#### Sanctuary Currents Symposium Recap (Kristine Faloon/MBNMS)

- Symposium was held April 10, 2010 at CSUMB
- Theme: “Voices of Hope: Science and Innovation for the Ocean”
- 250-300 in attendance
- Ricketts Memorial Lecture and Award: Rikk Kvitek
- Posters: 60 submitted, maximum number to date
  - 11 High School
  - 7 Undergraduate Students
  - 25 Graduate Students
  - 17 Agencies/Professionals
  - Poster awards presented to students
- See website for program, speaker abstracts, poster abstracts, and award winners
- <http://montereybay.noaa.gov/research/currsymp2010/welcome.html>

#### SUGGESTED FUTURE AGENDA ITEMS

- High concentration of nonylphenol (endocrine disrupter) in Morro Bay and Elkhorn Slough (requested by John Hunt)
- Upcoming RAP Meetings: possible conflicts
  - July 9 (Host: McPhee-Shaw/MLML): Cailliet will be at “Ichts/Herps” Conference
  - September 10 (Host: Pomeroy and Carr/UCSC) Pomeroy will be at “California and the World Ocean” Conference

- November 12 (Host: Harrold/MBA): Several will be at “Western Society of Naturalists” Conference
- Burton will poll RAP for meeting conflicts (2010, 2011)

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#### **Future Agenda Items (running list):**

- Water Quality
  - Critical coastal areas presentation (ASBS, areas water quality impaired, areas in good state; Ross Clark)
- SIMoN
  - SIMoN Special Status Species Project (Jennifer Brown)
- Communication Partnership for Science and the Sea (COMPASS)
- Wave Model Development and Implementation (Paul Wittmann/Fleet Numerical)
- Data integration across monitoring programs (e.g., water quality, PISCO, MARINe, IOOS), and availability to the public
- Recent event: Supreme Court allows Navy Sonar (per John Hunt)
- Predicting sea level rise for the state of California (Larry Breaker, JPL, OPC)
- CeNCOOS update (new website; activities)
- High-res models of CA (Cayan or Dettinger/USGS)
- National Weather Service Forecast Office (Tom Evans, Warning Coordination Meteorologist)
- Presentation on IEAs (e.g., Phil Levin, Frank Schwing, John Stein), including IEAs that have been implemented (per Yoklavich)
- MPAs
  - State MPA monitoring projects (Jason Vasques)
  - Marine Spatial Planning presentation (per Harrold); Fio recently heard Marine Spatial Planning talk from Massachusetts, or speaker from Center for Ocean Solutions (Meg Caldwell)

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#### **2010 RAP Meeting Schedule and Locations**

<b>Date</b>	<b>Host</b>	<b>Location</b>
January 8	Lindholm	CSU Monterey Bay
March 12	Storlazzi	USGS, Santa Cruz
May 14	Wasson	Elkhorn Slough NERR
July 9	McPhee-Shaw	Moss Landing Marine Laboratories
September 10	Pomeroy/Carr	Long Marine Lab, UC Santa Cruz
November 12	Harrold	Monterey Bay Aquarium

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